ABSTRACT

A motor drive unit 1 comprises an input shaft 10, a countershaft 20, a couple of helical gears, a housing 5 and a seventh bearing 57. The input shaft 10 is connected with the rotor shaft 60 of an electrical motor M for driving a vehicle, and the countershaft 20 is disposed in parallel with the input shaft 10, for rotational connection leading to drive wheels of the vehicle. The helical gears comprise a first gear 12 and a second gear 22, which enable power transmission from the input shaft 10 to the countershaft 20, and the housing 5 covers and retains the electrical motor M. The seventh bearing 57 is mounted in the housing 5, and it retains rotatably the end of the rotor shaft 60 that is located opposite to the coupled portion 14 of the rotor shaft 60 and the input shaft 10. At the coupled portion 14, a wave spring 82 is sandwiched between the rotor shaft 60 and the input shaft 10, so that the wave spring 82 pushes the rotor shaft 60 and the input shaft 10 axially away from each other, with the rotor shaft 60 pushing the housing 5 axially via the seventh bearing 57. Furthermore, the drive unit is arranged such that while the electrical motor M is in operation, an axial thrust acting on the input shaft 10 from the first gear 12 pushes the input shaft 10 to the rotor shaft 60. In this arrangement, the pushing force by which the rotor shaft 60 pushes the housing 5 is variable in correspondence to the operational condition of the electrical motor M.